

CARBON TRANSFORMING PROCESS

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CROSS REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of provisional application 60/432,080.

BACKGROUND OF THE INVENTION

The invention relates to the processing of waste, contaminated, or raw materials. Crude oil can be processed to purify oil and separate water.

SUMMARY OF THE INVENTION

The present invention provides a process and device that treat materials to separate them and provide usable materials.

It is an object of the invention to provide a method for separating and treating materials.

Specifically, it would be able to process tar and heavy oil and produce usable oil and waste water.

DESCRIPTION OF THE DRAWINGS

Fig. 1 is a flow diagram of an embodiment of the invention.

Fig. 2 is an enlarged portion of the flow diagram.

Fig. 3 is an enlarged portion of the flow diagram.

DETAILED DESCRIPTION OF THE INVENTION

A typical embodiment of the present invention is illustrated in Figure 1. The process material moves out of tank T-103 and through MV104, P-105, BA-107, MV-109 and at this point it is under high pressure around 500 - 1000 psi, it then enters Reactor number R-100. Water is pumped by P-106 and leaves T-101 through MV-102, P-106, BA-108 and enters R-100. R-100 is a stirred reactor where the material is heated and begins to react. Liquid sodium is pumped by P-207 and travels from the liquid sodium tank through MV-206, P-207, BA-128, MV-127 and enters R-100. The process material and the water react with the liquid sodium in a violent reaction. The sodium rips oxygen off of the water molecule and changes the electronic balance in the process environment, this creates a tremendous increase in the hydrogen proton production and provides hydrogen protons as terminals in the evolving carbon chain. All of the energy required to drive this reaction is provided by the mixture of liquid sodium and water. This creates so much heat that you will likely need to provide cooling for the reactor.

The reaction products will be in the form of some solid liquid and gas. The purpose of this process is to maximize the liquid oil production and to produce less carbon. Solid and liquid reaction products leave R-100 under level control and move through BA-111 then through BA-112. The sequencing of these two valves provides for the passage of a discreet quantity and allows for very accurate control. The liquid and solid components then travel to V-113 where the pressure is reduced to near atmospheric and the material is allowed to separate into solid liquid and gas components. Any gas production moves through BA-126 and MV-125. Oil production from this process material moves through BA-122 and into T-119 the oil storage tank. The water now has a high level of sodium hydroxide and some sodium chloride and moves through BA-201, MV202 and enters R-200. R-200 acts as a flash vessel to remove the water vapor and dry the sodium. R-200 runs at a temperature around 200 degrees C and the liquid sodium moves out of R-200 through MV-203, BA-204 and into T-205 where it undergoes electrolysis and the chlorine contaminants are removed as gas and travel to S-213 where it is scrubbed out and form hydrochloric acid. Any other components such as potassium and magnesium that may have been picked up from the process material accumulates on the bottom of the tank and can be removed by gravity separation.

The liquid sodium is now ready to be used in the reaction zone and is transferred through MV-207, P-208, BA-128, MV-127 and enters R-100 where it reacts with the water and the process material to form the reaction products. The vapor that comes off of R-100 travels through MV-116, BA-117, through the oil and water tank for heat exchange and finally through HE-118 and into T-119. T-119 acts as a separator and allows for the separation of oil, gas and water. The gas travels out of T-119 through BA-123 and into T-124, a sample of the gas may be taken from MV-125. The oil is removed to storage and the water is removed to a final water treatment.

CLAIMS

1. A process for treating materials comprising:
combining the material with water,
adding liquid sodium,
separating the resulting compounds to provide distinct materials.

ABSTRACT

The invention relates to the processing of waste, contaminated, or raw materials. Crude oil can be processed to purify oil and separate water.